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FOREIGN ANIMAL
DISEASES REPORT



APRIL 1974

EXOTIC NEWCASTLE DISEASE QUARANTINE
EXTENDED IN EL PASO, TEXAS



On March 27, 1974, Federal and State quarantines to stop the spread of exotic Newcastle disease in the El Paso, Texas area were extended along the U.S.-Mexico border southeast of El Paso to the El Paso-Hudspeth county line.

The quarantine extension along the 3-mile wide corridor was imposed by USDA's Animal and Plant Health Inspection Service (APHIS) and the Texas Animal Health Commission when the disease was confirmed in two backyard flocks and a commercial egg ranch near Clint. These are the first new cases of the disease in the area since March 8, 1974.

The disease was originally confirmed in El Paso on February 13, 1974. Within 24 hours a State-Federal task force moved into the area to start operations to establish the quarantine, test flocks, destroy infected and exposed birds, clean and disinfect premises, and keep all birds in the area under surveillance to find any additional infection. By March 8, 1974, 45 flocks containing some 1,100 birds had been destroyed and flock owners were paid indemnity of around \$6,000 to help compensate them for their losses.

The two backyard flocks in Clint were destroyed March 25, 1974. These flocks consisted of about 100 birds, and included chickens, ducks and turkeys. The commercial flock of about 188,000 white Leghorn hens has been appraised and destroyed.

On April 12, 1974, the quarantine was further extended to include the residential section between Fort Bliss and the Franklin Mountains and from Interstate 10 to Hercules Avenue. This area was quarantined when a small backyard flock in the area was found infected. As of April 23, 1974, a total of 88 infected and exposed flocks consisting of about 190,570 birds have been depopulated.

USDA DECLARES PUERTO RICO HOG CHOLERA FREE

On March 29, 1974, the Commonwealth of Puerto Rico was officially recognized as "hog cholera free" by the U.S. Department of Agriculture (USDA) with the presentation of a certificate signed by Secretary Earl L. Butz.

The certificate was presented to Dr. Antonio Gonzalez Chapel, Secretary of Agriculture for the Commonwealth, at a brief ceremony in his San Juan office. Making the presentation was Dr. Milton J. Tillery, Southeastern Regional Director of USDA's Animal and Plant Health Inspection Service (APHIS), Veterinary Services.

Puerto Rico qualified as hog cholera free on March 23, 1974, by going 12 months with no infection and by carrying out other measures of the cooperative eradication program.

Forty nine states as well as Puerto Rico are now designated hog cholera free by USDA. Texas is the only state yet to qualify for the designation.

The most recent hog cholera case in the United States was confirmed February 7, 1974, in Mississippi. Because the disease was quickly confined and did not spread, the state did not lose its hog cholera free designation.

Prior to the Mississippi case, the last hog cholera infection had been reported in Indiana in June 1973. An estimated 5,000-6,000 swine herds were infected yearly in the United States before the start of the cooperative eradication program.

ADVISORY COMMITTEE ON FOREIGN ANIMAL AND POULTRY DISEASES MEETS

The Secretary of Agriculture's Advisory Committee on Foreign Animal and Poultry Diseases met April 2, 1974, in Hyattsville, Maryland.

Immediate funding for construction of the Fleming Key animal quarantine station in Florida, and for research on foot-and-mouth disease (FMD) vaccine at the Plum Island Animal Disease Center in New York was recommended by the Advisory Committee.

In its recommendation, the Committee also urged expediting funding and construction of the proposed Fleming Key animal quarantine station. Operation of this station would allow animals to be imported from countries infected with FMD--but only after complying with rigid quarantine and testing regulations at both the point of origin and before entry to this country. This would insure that the imported animals would not expose the healthy U.S. animal population to exotic diseases. The committee suggested that the present law authorizing construction of the Fleming Key animal quarantine facility be changed to provide for reimbursement to the government of construction costs through the collection of fees charged livestock owners utilizing the import facilities.

Expanded laboratory facilities at Plum Island would permit handling an increase in vaccine research and additional diagnostic and testing facilities. These are needed to handle the upsurge in the number of animals imported from countries that have livestock diseases that presently don't exist in the United States.

It was further recommended that USDA constantly review and improve the criteria used to classify areas as free of FMD.

The committee is composed of representatives of the livestock industry and was established in 1947 as the Industry Advisory Committee on Foot-and-Mouth Disease to advise the Secretary of Agriculture on actions necessary to protect the U.S. livestock industry from this disease. Its scope was expanded recently to include all animal diseases foreign to the United States.

USDA SEEKS GUARANTEE OF PAYMENTS FOR ANIMAL CARE DURING IMPORT QUARANTINES

Imported animals would be subject to public sale by the Government if importers fail to pay their costs while in quarantine, under new Federal regulations proposed on March 25, 1974, by the U.S. Department of Agriculture.

The proposed regulation would specify formally the government's authority to recover care, feeding and any other costs incurred during the mandatory import quarantines in port-of-entry quarantine facilities. Livestock from all countries except Canada and Mexico must be quarantined upon their arrival in the United States.

While the great majority of importers pay the costs, there are occasions when owners or agents have defaulted. The proposal would authorize the Government to dispose of the animal at public sale and to hold any balance in excess of the amount due for six months pending claims by the owner.

USDA officials would also be authorized to arrange for care and feeding of animals, at the owner's expense, if the owner neglects to provide adequately for such care at non-federal owned quarantine facilities.

Other measures in the proposed regulations would require:

- Arrangement by the importer for acceptable transportation to the quarantine facility.
- Requests from the importer for USDA inspection and other veterinary services to be made in writing, with a waiver of claims against the agency and its employees.

USDA PROPOSES REGULATION OF MILK IMPORTS TO PREVENT LIVESTOCK DISEASE

On March 4, 1974, the U.S. Department of Agriculture (USDA) proposed further changes in Federal regulations to protect the Nation's livestock from contagious animal diseases that might be introduced if certain imported milk and milk products found their way into livestock feeds.

Recent increases in milk and milk product import quotas make it necessary to strengthen safeguards against the accidental introduction of foot-and-mouth disease (FMD) and rinderpest, two highly destructive diseases that do not now occur in the United States.

These proposals reflect additional information and comments that were received following publication of earlier proposals on September 6, 1973.

The proposals include the following provisions:

- Concentrated liquid milk products would be eligible for unrestricted entry when processed in hermetically sealed metal containers so they may be stored without refrigeration.
- Other liquid milk products would be permitted unrestricted entry if they are hermetically sealed, heated after packing at 230°F. for 20 minutes, and certified to that effect by officials of the exporting nation.
- Dry milk products would be permitted entry only as restricted materials that would have to move under Government seal from the port of entry to approved establishments for further processing. Shipments of products would be permitted storage in approved warehouses prior to being moved to authorized establishments.
- Milk products amounting to 10 pounds or less per traveler would be permitted entry upon the signed statement by the traveler that they are for personal consumption.
- Shipments of cheese, butter, butter oil, and consumer size packages of dry milk products for retail sale and human consumption would be exempt from the proposed restrictions.

The proposed regulations authorize the APHIS Deputy Administrator for Veterinary Services to permit limited importation of restricted milk products not specifically provided for when, on case-by-case approval, he determines that such action would not endanger the U.S. livestock or poultry industry.

Milk or milk products from FMD or rinderpest-free countries would be permitted unrestricted entry after passing through infected countries only if such passage were made under seal from the originating country.

FOOT-AND-MOUTH DISEASE: THE CARRIER ANIMAL*

The animal carrier of foot-and-mouth disease virus is a phenomenon that has been recognized since 1909, when it was found that cattle could expel virus for up to 8 months. The unanswered question for 50 years thereafter was the frequency of occurrence.

Since 1959, considerable additional information has become available. Independent investigators, for example, have isolated foot-and-mouth disease from the esophageal-pharyngeal (EP) liquid of approximately 50 percent of animals 6 months after an outbreak of the disease. Despite the presence of antibodies in the carrier cattle, sufficient latent virus was present in the EP liquid to infect susceptible livestock, particularly pigs.

Subsequently, scientists found that cattle immunized with lapinized vaccine not only had detectable virus 180 days later, but were capable of passing the virus to their offspring. Virus of the same serotype as that used in the vaccine administered to the parent cows was isolated from the EP liquid of the unvaccinated offspring 12-16 months of age.

(*Footnote on page 5)

Additional data provided by other researchers confirmed: (1) viral antigenicity showed little variation 17 weeks after experimental infection; (2) the carrier state in vaccinated cattle was unimpeded by the presence of antibodies; and (3) the carrier state persists in cattle up to 15 months and in sheep up to 4 months.

During recent investigations in Brazil, foot-and-mouth disease virus was isolated from 52.7 percent of vaccinated cattle in various regions free of the disease for at least 6 months.

This accumulated research data highlights inherent dangers. As an increasing proportion of an animal population become carriers, there is greater probability for the emergency of antigenic variants. Ultimately, the variant strains may overwhelm the existing herd immunity and create new outbreaks.

In recent years, the increasing importance of artificial insemination presents a final consideration in the transmission of foot-and-mouth disease. When bulls were artificially infected, foot-and-mouth disease virus was recovered from the semen as early as 12 hours and as late as 10 days afterward. Subsequent use of this semen produced clinical foot-and-mouth disease in 38 percent of inseminated calves. In a separate trial involving 22 bulls free of clinical signs of FMD for at least 6 months, virus was isolated from the frozen semen of seven.

Additional research is planned on the persistence of foot-and-mouth disease virus in bull semen and its possible elimination without impairment of spermatozoa viability. Investigations might also be directed to study of the role of the vaccinated bull in the dissemination of foot-and-mouth disease virus to offspring via unvaccinated cows free of the disease.

(* Abstracted from: Pustiglione Netto, L. Carriers in foot-and-mouth disease. Biol. Sao Paulo, 39(1): 14-16, 1973).

MEXICO SCREWORM PLANT CONSTRUCTION UNDER NEGOTIATION

As of March 29, 1974, Mexican and U.S. officials were negotiating with contractors for construction of the main building of a facility in southern Mexico in which to produce more than 300 million sexually sterile screwworm flies each week.

Progress with negotiations and other efforts related to eradicating this livestock pest from Mexico was reported to the joint Mexico-U.S. Commission for the Eradication of Screwworm meeting at the U.S. Department of Agriculture in Washington, D.C., March 28, 1974.

The unique production plant is scheduled to be completed in 1975. Land leveling, road building, and construction of some related structures are now underway. Sterile flies from the plant, located near Tuxtla Gutierrez, will be released from aircraft over screwworm-infested areas of Mexico.

When the sterilized screwworm flies mate with native screwworms, the eggs that result are sterile, thus diminishing the insect's ability to multiply. The technique has been successful in the United States. Authorities estimate that

several years will be required, however, to eliminate the costly pest from Mexico and thereby lessen the threat to U.S. livestock.

When screwworm eradication is completed north of Tuxtla Gutierrez, a permanent barrier will be formed against northward migrations of the insect, by continuously releasing sterile flies in a wide path across Mexico's narrow Isthmus of Tehuantepec.

A report to the Commission on the current screwworm situation in northern Mexico indicated there could be serious outbreaks if the weeks ahead bring heavy moisture and warm weather. Conditions in this area usually indicate the intensity of seasonal screwworm threat to livestock in the southwestern United States.

The joint screwworm eradication commission has equal representation of Mexican and United States agricultural and veterinary officials, two of whom serve as full-time director and co-director.

EMERGENCY VECTOR AND PEST CONTROL WORKSHOP

On April 2-4, 1974, an Emergency Vector and Pest Control Workshop was held at the Plant Protection and Quarantine Training Center, Battle Creek, Michigan. The workshop, sponsored jointly by Emergency Programs, Veterinary Services, and Emergency Programs, Plant Protection and Quarantine, was designed to prepare selected VS and PPQ personnel to conduct emergency vector and pest control operations in support of animal and poultry disease eradication programs.

Topics which were considered during the workshop included: The Philosophy of Foreign Animal Disease Eradication; Utilization of Resources Outside of USDA; Organization of a Vector or Pest Control Unit; The Federal Insecticide, Fungicide, and Rodenticide Act; Crop Insect Control Techniques and Regulatory Requirements; Vector Control Techniques; New Approaches in Plant Disease Control; and Contract Negotiation for Vector and Pest Control. In addition, half of each day was devoted to a test exercise involving eradication of the tsetse fly, Glossina palpalis, in support of a hypothetical trypanosomiasis outbreak.

WORLD POULTRY CONGRESS

The XV World's Poultry Congress/Exposition held every four years, will convene at the Port of New Orleans, Exhibition Center "The Rivergate," New Orleans, Louisiana, on August 11-16, 1974. The Congress theme is "Focus on Feeding Mankind." Papers will be presented on all phases of poultry production, economics, genetics, nutrition, products technology, physiology, pathology, and disease eradication. Ten U.S. Department of Agriculture agencies are sponsoring a Service Center in which the role of USDA relative to the poultry industry will be explained.

At the World's Poultry Congress, a symposium on Viscerotropic Velogenic Newcastle Disease will be held. Another symposium will be on "Establishment of Disease Free Poultry Flocks." Dr. H. E. Marthedal, Institute of Poultry Diseases, Royal Veterinary and Agriculture University, Copenhagen, Denmark, is chairman.

He will give an overview on disease free poultry flocks.

The 9th United States-Japan Natural Resources-Mycoplasmosis Panel will also convene at the XV World's Poultry Congress. This panel's purpose is to disseminate scientific research information on mycoplasmosis and other infectious diseases of livestock and poultry to further understanding of mutual animal disease problems. Meetings of the panel have been held yearly since 1966 and alternate between the United States and Japan. Laboratory and industry facility visits and field trips are scheduled with the meeting.

WORLD DISEASE REPORTS*

Country	Date 1973	New Outbreaks	Country	Date 1973	New Outbreaks
<u>Foot-and-Mouth Disease</u>					
Argentina	Dec. 16-31	17	Kenya	November	4
	Jan. 1-15, 1974	14	Lebanon	December	3
Brazil	Nov. 3-Dec. 28	1057	Malawi	November	2
Colombia	January 1974	20	Nigeria	Jan. 1-March 31	7
Ecuador	Jan. 1-15, 1974	2	Paraguay	Dec. 16-31	1
France	Jan. 16-31, 1974	1	Spain	Jan. 1-15, 1974	12
Greece	November	16	Tanzania	August	4
Hong Kong	Nov.-Dec.	40	Thailand	April-June	20**
India	Sept.-Oct.	49	Togo	Oct.-Dec.	4
Indonesia	October	7990**	Uruguay	January 1974	6
	November	2336**	U.S.S.R.	Nov.-Dec.	46
	December	93**	Venezuela	November	6
Iran	January 1974	19			
<u>Rinderpest</u>					
Ghana	September	1	India	Sept.-Oct.	9
<u>Contagious Bovine Pleuropneumonia</u>					
Angola	December	5	Mali	Aug.-Oct.	11
Ghana	September	1	Nigeria	Jan.-March	25
Guinea	Oct.-Dec.	1		January 1974	4
India	June-Oct.	22	Senegal	Aug.-Dec.	2
<u>Lumpy Skin Disease</u>					
Botswana	January 1974	1	Rhodesia	December	3
<u>Sheep Pox</u>					
India	Sept.-Oct.	33	Turkey	December	65
Iran	January 1974	19	U.S.S.R.	Nov.-Dec.	6
Senegal	July-Dec.	1			

Dourine

U.S.S.R. reported 3 cases occurring from November through December.

African Swine Fever

France	Jan. 16-31, 1974	2	Spain	Nov. 16-Dec. 31	116
Portugal	January 1974	33		January 1974	21

(*Adapted from International Office of Epizootics Monthly Circular No. 326).
(**Cases)

FOOT-AND-MOUTH DISEASE IN FRANCE*

A total of 37 outbreaks of foot-and-mouth disease, type C, were reported in pigs and later in young non-vaccinated cattle, since February 6, 1974, date of the occurrence of the first outbreak of the disease. Very strict sanitary measures have been applied, including slaughter and destruction.

(*From Pan American Foot-and-Mouth Disease Center, Epidemiological Report, Vol. 6, No. 7).